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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,351	11/03/2003	Gunther Fischbach	FISCHBACH-6	5242

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HENRY M FEIEREISEN, LLC
350 FIFTH AVENUE
SUITE 4714
NEW YORK, NY 10118

EXAMINER	
VON BUHR, MARIA N	

ART UNIT	PAPER NUMBER
2125	

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/700,351	FISCHBACH ET AL.	
	Examiner	Art Unit	
	Maria N. Von Buhr	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 November 2003 and 15 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 November 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11032003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-17 are pending in this application.

2. Receipt is acknowledged of papers submitted under 35 U.S.C. §119(a)-(d), which papers have been placed of record in the file.

3. Examiner acknowledges receipt of Applicant's information disclosure statement, received 03 November 2003, with accompanying reference copies. This submission is in compliance with the provisions of 37 CFR §1.97. Accordingly, it has been taken into consideration for this Office action.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

5. The disclosure is objected to, because on pages 3 and 11, Applicant introduces the abbreviations "SPS" and "SCSI," respectively, both without any definition. Appropriate correction is required.

6. The drawings are objected to as failing to comply with 37 CFR §1.84(p)(5), because they do not include the following reference sign(s) mentioned in the description: 1 and 1' (page 9 of the specification).

7. The drawings are objected to under 37 CFR §1.83(a). The drawings must show every feature of the invention specified in the claims. Hence, connecting of either actuators/sensors or operating elements to both the bus system and a pre-processing unit (claims 1, 16 and 17, respectively) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

8. Corrected drawing sheets in compliance with 37 CFR §1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR §1.121(d). If the changes are not accepted by Examiner, Applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

9. The following is a quotation of the first paragraph of 35 U.S.C. §112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claim 1-10 and 17-23 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claims 1 and 16, the provision that "a plurality of actuators and/or sensors [are] connected via a bus system to the central processing unit" in combination with the provision that "the plurality of actuators and/or sensors, ... is connected with the first pre-processing unit" is not supported by the instant specification. In this case, the specification only provides for some actuators/sensors being connected to the bus system and some actuators/sensors being connected to the pre-processing unit, but not the actuators/sensors, as a whole, being connected to both.

In claim 17, the provision that "a first operating element ... [is] connected to the central processing unit via a bus system" in combination with the provision that "a first pre-processing unit ... [is] disposed in the bus system between the central processing unit and the first operating element" is not supported by the instant specification. In this case, the specification only provides for an operating element (i.e.; actuator/ sensor) being connected to either the bus system or the pre-processing unit, but not both.

11. The following is a quotation of the second paragraph of 35 U.S.C. §112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which Applicant regards as his invention.

12. Claims 1-17 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

In claims 1, 11, 16 and 17, the abbreviations "ASIC" and "FPGA" require a definition, at their first occurrence within the claim language. Further in claim 17, the phrase "disposed in the bus system" has no clear context.

Further in claims 1, 11, 16 and 17, the phrase "high resolution" is deemed to be an indefinite recitation of a degree, and in claims 1, 11 and 16, the phrase "rapidly fluctuating/changing" is deemed to be an indefinite recitation of a degree. In this regard, when a word of degree is used as a limitation, it is

necessary to determine whether the specification provides some standard for measuring that degree. See *Seattle Box Company, Inc. V. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 221 USPQ 568 (Fed. Cir. 1984). In this case, the specification does not enable one skilled in the art to reasonably establish what may be construed as being within the metes and bounds of the word of degree. Therefore, one of ordinary skill in the art would not be apprised as to the claimed invention's scope when the claims are read in light of the specification. See *Ex parte Oetiker*, 23 USPQ2d 1641.

In claim 4, there is no clear context for "downstream of the bus system."

In claim 9, it is unclear how the first pre-processing unit can "relieve the central processing unit from communicating via the bus," when (1) the parent claim provides for the just such communication, since it asserts that "a plurality of actuators and/or sensors [are] connected via a bus system to the central processing unit," implying that communication between the actuators/sensors and the CPU takes place "via the bus system", and (2) the parent claim asserts that "the first pre-processing unit is connected with the central processing unit via the bus system" (i.e.; the pre-processing unit is not instantly claimed as being between the CPU and bus system, but is instead presented as being connected to the CPU through the bus system), implying that communication between the pre-processing unit and the CPU takes place "via the bus system." In other words, the instant claim language provides for the CPU performing all its communication via the bus, and therefore, there is no clear support within the instant claim language for such a statement of desired result, wherein the mere presence of the pre-processing unit accomplishes relieving of such communication.

In claim 10, there is no clear and proper antecedent basis for "the second pre-processing unit." Also, a similar ambiguity exists, regarding how this second pre-processing unit can "relieve the central processing unit from communicating via the bus," as is presented above with regard to claim 9.

In claim 15, there is no clear and proper antecedent basis for "the other pre-processing unit." Also, a similar ambiguity exists, regarding how the pre-processing unit can "relieve the central processing unit from communicating via the bus," as is presented above with regard to claim 9, because there is no clear support within the instant claim language for such a statement of desired result, wherein the mere presence of the pre-processing unit accomplishes relieving of such communication.

In claim 20, there is no clear context for "downstream of the bus system." Also, there is no clear and proper antecedent basis for "the first central processing unit," "the second bus pre-processing unit" nor "the bus system."

The remainder of the claims are rejected as necessarily incorporating the above-noted ambiguities of their parent claims.

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. §102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by Applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by Applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by Applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 1-4 and 6-17 are rejected under 35 U.S.C. §102(e) as being clearly anticipated by Moon et al. (U.S. Patent No. 6,675,236), which discloses a "field bus interface board for performing a digital communication between various kinds of sensors and actuators in control fields" (col. 1, lines 6-16), for "improved high speed communication" (col. 5, lines 3-14), wherein field bus controller 320 (analogous to the instantly claimed "first pre-processing unit") communications between a plurality of operating elements (i.e. "actuators/sensors") and a computer 200, with input/output peripherals 230, 240 and 250 (analogous to the instantly claimed "central processing unit," with I/O devices), via field bus line 500 (analogous to the instantly claimed "bus system"), including using a main controller 310 (analogous to the instantly claimed "second pre-processing unit"). See at least, col. 2, lines 5-19; Figs. 2 and 3, with associated text). As per the preamble recitation, "for a plastics processing machine," the recitation that has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

15. Claims 1-4 and 6-17 are rejected under 35 U.S.C. §102(b) as being clearly anticipated by Bermann et al. (WO 00/04429; translation available as U.S. Patent No. 6,654,645), which discloses a "a control system with a personal computer (1) fitted with a communications processor (14) for connection to a field bus (2) to which sensors (3, 4) and/or actuators (5, 6) for controlling a process may be connected. A monitoring unit (16) monitors cyclic data transfer in the field bus (2) and causes the PC processor (7) to further process the data entered into the field bus (2) through a control program when at least one predetermined condition is fulfilled, for instance changes in the process data. The PC processor (7) is thus relieved from constant polling of the process data stored in a memory (15). The invention is used in communications processors for

personal computers" (abstract), wherein communication processor 14 (analogous to the instantly claimed "first pre-processing unit") communications between a plurality of operating elements (i.e. "actuators/sensors") and PC 7 (analogous to the instantly claimed "central processing unit"), via field bus 2 (analogous to the instantly claimed "bus system"), including using a bus interface 12 (analogous to the instantly claimed "second pre-processing unit"). As per the preamble recitation, "for a plastics processing machine," the recitation that has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

16. Claims 1-17 are rejected under 35 U.S.C. §102(b) as being clearly anticipated by Gotze et al. (U.S. Patent No. 5,941,966), which discloses "a hierarchical processor architecture with at least two processor levels, which are respectively optimized for specific control tasks ... The invention is particularly suitable for the control of a multitude of field data buses or field buses for general applications, and in particular for the control of field buses in motor vehicles, such as ABUS, CAN bus, SAE bus J1850 or VAN bus" (abstract), for achieving "a high signal processing speed and a high data processing speed" (col. 2, lines 42-51), wherein processor 1 (analogous to the instantly claimed "first pre-processing unit") communications between a plurality of operating elements (i.e. "actuators/sensors") and a CPU 106, having a plurality of input/output peripherals, shown in Fig. 5 (analogous to the instantly claimed "central processing unit," with I/O devices), via data bus 101 (analogous to the instantly claimed "bus system"), including using a second processor 2 (analogous to the instantly claimed "second pre-processing unit"). See at least, col. 1, lines 8-16 and 32-39; col. 2, lines 41-51; col. 5, lines 40-55; Figs. 1, 2 and 5, with associated text). As per the preamble recitation, "for a plastics processing machine," the recitation that has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

17. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. Applicant is advised to carefully review the cited art, as evidence of the state of the art, in preparation for responding to this Office action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria N. Von Buhr whose telephone number is 571-272-3755. The examiner can normally be reached on M-F (9am-5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Maria N. Von Buhr
Primary Patent Examiner
Art Unit 2125

MNVB
6/18/05